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CITY OF DURHAM | NORTH CAROLINA

**Date:** July 7, 2015

**To:** Thomas J. Bonfield, City Manager
**Through:** W. Bowman Ferguson, Deputy City Manager
**From:** Marvin Williams, Public Works Director
**Subject:** Private Utility Permit Program (Permitting, Locating and Inspections of Public Utilities Installed within Public Right-of-Ways)

## ***Executive Summary***

Private utilities (electric, telephone, telecomm, gas) generally place their utility lines and appurtenances in the public rights of way (ROW) on both City and NCDOT (North Carolina Department of Transportation) maintained streets. The permitting and oversight of that work is done by the Department of Public Works' Private Utility Permit program. This staff report presents background information on the costs associated with the review, permitting, utility locating, and inspections efforts required of that program. The report also reviews historical data, projects future needs, analyzes the City's current fee structure and industry standards among peer cities, and proposes options for a revised fee schedule.

The Department of Public Works is responsible for the protection of the City's infrastructure. Failure to property locate or inspect construction work in the public ROW could leave infrastructure damaged or exposed to accelerated deterioration, both of which put the citizens and public funds at risk. Currently City staff expends approximately 3.35 FTE equivalent hours annually (one full-time utility locator, one full-time engineering inspector, one full-time permit review technician, and percentages of supervision and administrative staff) towards the administration of this program. However, the program is severely understaffed and by 2016 the current workload is expected to triple the 2010 program.

The 2015 estimated annual revenues of $112,808 generated by the current fee schedule only cover a small portion of the staff costs dedicated to the administration of the program and fall far short of any significant cost recovery. To help bridge this gap several alternatives have been analyzed and a new fee schedule is proposed to generate full recovery of the costs to administer this program.

## ***History of the Durham Utility Excavation Permit Program***

Private utilities (electric, telephone, telecomm, gas) generally place their utility lines and appurtenances in the public ROW. The City has a vested interest in the continued function and maintenance of its infrastructure (including but not limited to roadways, bike lanes, sidewalk, water, sewer, storm drain, and signal fiber) that are located in public ROW along both City and NCDOT maintained roadways. In an effort to protect the City's infrastructure

the Department of Public Works has developed the Private Utility Permitting program. The major functions of the program include the review, permitting, locating, and inspecting of private utility installation within the public ROW. While other municipalities have similar programs and have chosen to seek full cost recovery from the private utility companies, by placing the burden of the cost of oversight on the utility, the City of Durham's current program relies on a combination of partial cost recovery supplemented by City tax revenue.

With the exception of license agreements/encroachment permits/etc., prior to 2006, no fees were charged in the City of Durham for utilities installed by private companies in the public ROW. The lack of a program to properly oversee the increasing volume of private utility work resulted in damage to various public utilities and infrastructure throughout the City. In 2006 as the City's growth continued, the Public Works Department noticed this growing long-term maintenance need and a new initiative was proposed to develop the Private Utility Permitting program. Based on the volume of work at that time, one engineer, one engineering inspector, and an administrative position were assigned to the task of administering the program. A fee of $0.25 per linear foot plus a $40 right of way permit fee was established to support the program.

The program was instituted as part of the FY06 approved budget, and beyond the budget process there was minimal outreach to the private utility companies or to the local community in general regarding this new program. For the first two years of the program the private utility companies continued to work in the public ROW, completing the permit process but refusing to pay the new permit fees when billed.

In 2008 the fee schedule was revisited, prompted by requests from the City of Durham to the various utility companies for payment of the past due bills. The utility industry joined forces with local developers on the matter and proposed a tiered fee schedule, which after many months of additional conversation eventually became the current Private Utility fee schedule (below) adopted in June 2010. The revenues generated from these fees were insufficient to cover the costs associated with the administration of this program, which at that point was becoming increasingly understaffed as local development began to recover from the recession.

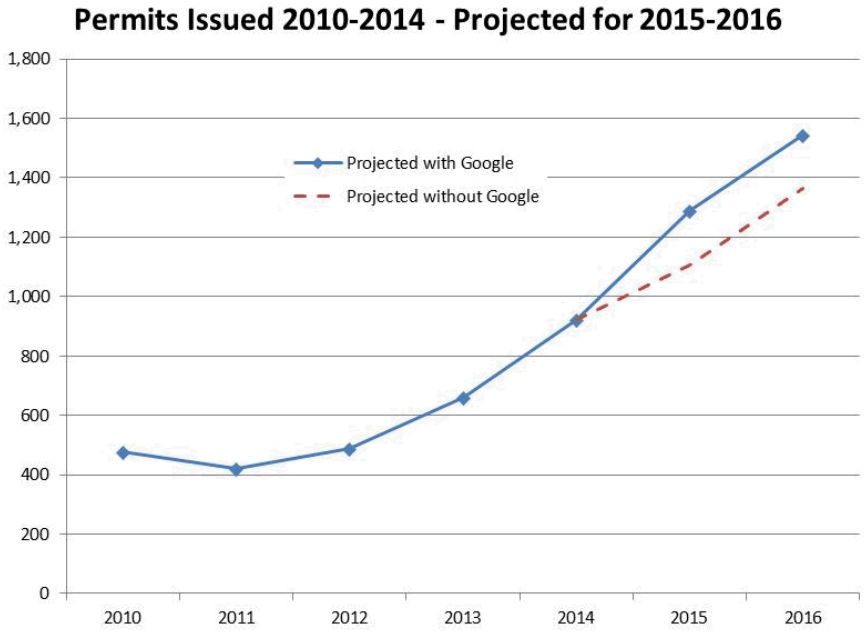
| ***2010 Private Utility Permit Fee Schedule*** |
|---|
| *1. 200 feet or less $50* |
| *2. Over 200 feet, up to 1,000 feet $120* |
| *3. Over 1,000 feet, up to 5,000 feet $460* |
| *4. Over 5,000 feet Calculate per (1) through (3) above* |
| *All permits applied for at one time in a contiguous defined geographic area will be included in one permit. Centerline Linear Foot Calculation in Right of Way Permit Fee* |

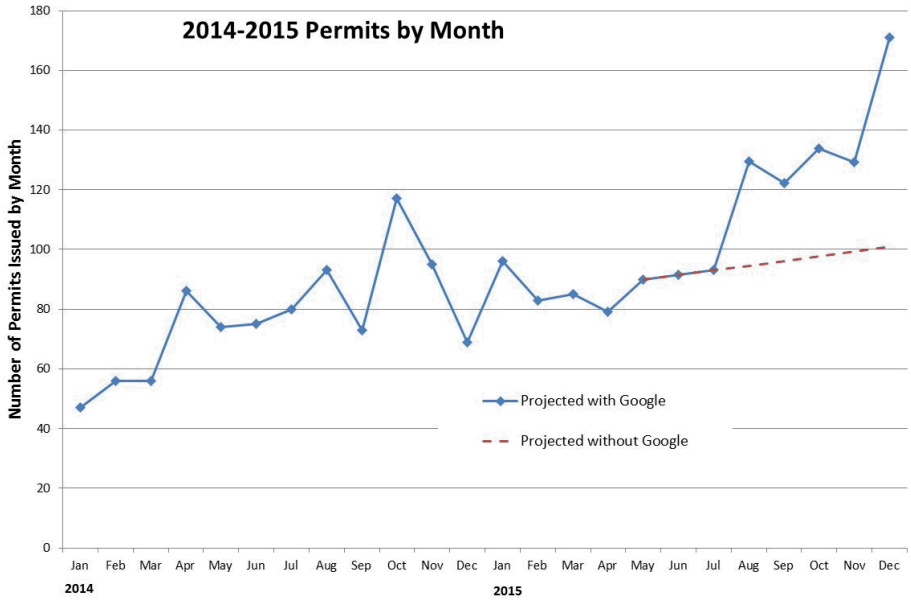
The permit and associated fee only apply to surface or underground utility installation work; there is no permit requirement or fee for aerial utility work in the street or public ROW. The average per linear foot recovery of the current fee schedule ranges between $0.09 - $0.12 per linear foot.

The 2010 fee schedule has since generated the following revenues (see below); however, as documented through analysis of historical data, including the number of permits issued, linear feet of utility lines permitted and installed, and revenue generation, this program has been underfunded since its inception.

| Year | Annual Revenue From Current Fee Schedule |
|---|---|
| 2010 | $58,130 |
| 2011 | $60,870 |
| 2012 | $55,870 |
| 2013 | $78,760 |
| 2014 | $114,420 |
| 2015 YTD | $56,404 |

Between 2010 and 2014, the number of permits issued and thus the volume of work tripled, while the number of FTE equivalents remained steady. There are seasonal fluctuations in the workload and also fluctuations in the types of utility installation work (long stretches versus point installations), but that growth is expected to continue for the next several years.






A more in depth review of the aggregate data (see below) shows that based on the number of permits issued over the last five years, over 90% were issued to the following companies: Duke Energy, AT&T, Frontier Communications (formerly Verizon), PSNC, and Time Warner. The number of permits received from Duke, Frontier, Time-Warner and others has remained fairly constant year-by-year. During 2015 there has been a dramatic increase in the number of permits from AT&T as well as the introduction of Google Fiber into the area. Following installation of the major fiber "backbones" throughout the city, future permit volume will be driven by the need to connect to each house or commercial establishment. Thus the increase is expected to continue throughout 2015, 2016, and beyond.

| | ***Number of Permits*** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ***Year*** | ***AT&T*** | ***Duke*** | ***Frontier*** | ***PSNC*** | ***Time Warner*** | ***Others*** | ***Google*** | ***Total*** | ***Average Per Month*** |
| 2010 | 1 | 22 | 42 | 171 | 210 | 31 | | 477 | 40 |
| 2011 | | 33 | 52 | 170 | 151 | 16 | | 422 | 35 |
| 2012 | | 36 | 31 | 187 | 220 | 15 | | 489 | 41 |
| 2013 | 3 | 45 | 38 | 291 | 254 | 31 | | 662 | 55 |
| 2014 | 8 | 37 | 39 | 553 | 252 | 32 | | 921 | 77 |
| 2015 | 48 | 45 | 60 | 714 | 207 | 33 | 184 | 1,291 | 108 |
| 2016 | 96 | 45 | 60 | 922 | 207 | 33 | 182 | 1,545 | 129 |

## ***Utility Permit Fee Analysis***

The current Utility Permit Fee schedule was implemented in 2010 and as previously summarized the current fee structure is insufficient to cover the cost of administering the Private Utility Permit program. Additionally, the current program is severely understaffed and the current fee structure only covers a small fraction of that need.

In order to fully fund this need the Department of Public Works has analyzed several options (see below). The proposed fee alternatives have been considered in detail with a look back through all of the individual permits issued between calendar years 2010-2014, and year-to-date through May12th, 2015.

| | Application Fee | | Inspections and Locating Fee per Linear Foot |
|---|---|---|---|
| Alternative | Base Fee | Fee per Linear Foot | |
| 50% Cost Recovery | $250 | $0.030 | $0.200 |
| 75% Cost Recovery | $325 | $0.040 | $0.290 |
| 100% Cost Recovery | $400 | $0.050 | $0.360 |

For comparison, a computation of revenue generation based on the various fee alternatives was generated against that historical data.

| | Total Annual Revenue | | | |
|---|---|---|---|---|
| Calendar Year | Existing Fee Schedule | Alternative Fee Schedules for Cost Recovery | | |
| | | 50% Recovery | 75% Recovery | 100% Recovery |
| 2010 | $58,130 | $166,988 | $223,518 | $275,898 |
| 2011 | $60,870 | $163,408 | $220,067 | $271,799 |
| 2012 | $55,870 | $170,813 | $228,603 | $282,169 |
| 2013 | $78,760 | $239,308 | $321,049 | $396,371 |
| 2014 | $114,420 | $338,655 | $454,862 | $561,643 |
| 2015 | $409,830 | $933,290 | $1,295,567 | $1,604,754 |
| 2016 | $476,368 | $1,082,920 | $1,497,832 | $1,861,390 |

Each alternative analyzed proposes a fee schedule that includes, 1) an application fee, 2) a per linear foot review fee, and 3) a per linear foot fee for inspection and locating within the street or public ROW. This fee structure is necessary to provide fairness to the different types of utility installations, point repair or cross street boring versus long longitudinal runs.

Each type of installation requires different time commitments regarding the different phases of the process (review, utility location, and inspection). The option for full cost recovery is recommended. The revenues generated based on the historical data and future projections are as follows and an analysis of the impact on individual corporations is available in the appendix.

A separate re-inspection fee of $325 is also proposed. This fee will be charged for any second and subsequent visit needed to ensure that the site has been restored to an acceptable level of service. If a re-inspection fee is issued and not paid, all future permits will be held until any outstanding fees are settled. This is consistent with existing practice.

***Private Utility Excavation – Process and Program Costs***

The Department of Public Works issues a "Utility Excavation Permit" for any and each underground construction activity in City streets or public ROW, as well as those on NCDOT maintained streets and rights of way within City limits. A fee is charged to the utility requesting the permit (permittee). Based on recent numbers, an average permit is typically 743 linear feet of work/installation. In 2014, approximately 1,041 permits were issued.

The revenue collected under the existing 2010 fee schedule does not cover all of the associated costs. Current staff needs are identified as follows and are exclusive of the efforts required of the Google and AT&T fiber installation efforts. These staff needs exceed by almost 100% the current staff available to perform the functions associated with this program.

**STAFFING LEVEL REQUIREMENT CONSISTENT WITH WORKLOAD**

| Position/function | FTE Equivalent | Full FTE Annual Cost Salary + Benefits and Equipment | Pro-Rated Annual Cost |
|---|---|---|---|
| Engineering Technician/permitting | 2.0 | $74,000 | $148,000 |
| Utility Locater | 2.0 | $71,221 | $142,442 |
| Inspector | 2.0 | $83,123 | $166,246 |
| Engineer (CEIV)/Proj Supv | 0.2 | $141,390 | $28,278 |
| Support Staff | 0.25 | $61,150 | $15,288 |
| | | **Total Annual Cost** | $500,254 |

The times needed to perform each of the major tasks associated with the oversight of the installation of a private utility in the public ROW differ with each permit, but for the purposes of this analysis are assumed as follows. These averages assume a trained and skilled FTE performing each function.

- Permitting - Fifteen (15) working day turnaround on review/approval of permit applications
- Locating – Each staff person can locate 4,000 linear feet per day
- Inspections – One inspector for every six (6) construction crews

The total number of permits received each year alone is not a good indicator of work load. The issuance of the permit is a small fraction of the overall staff effort required. The majority of the effort is in the daily water/sewer/stormwater utility locations and the inspection of the work associated with the installation, which serve to protect City assets and provide services to our residents during construction. An additional amount of staff time is devoted to trouble shooting problems, construction conflicts and resolving citizen concerns.

Long utility installation runs create more of burden for both utility location and inspection. Compared to Duke, Frontier, PSNC and Time-Warner the fiber optic permits for AT&T and Google have very large amounts of linear footage associated with the trenching and directional boring. The number of utility locaters required to mark the pipes, valves, meters, water services etc. before construction can begin, and the number of inspectors necessary to look after the work while construction is being performed is directly proportional to the linear footage. Ideally, an inspector will visit each site twice per day and is looking for defects that need to be remedied by the contractor, creating an inventory of the punch-list items (see below).



Thus far in 2015 AT&T has averaged about 11,000 linear feet of cable per permit, and Google is expected to average about 10,000 linear feet per permit. By comparison Duke, Frontier, PSNC and Time-Warner consistently average between 400-2,000 linear feet per

permit. As a result, the influx of permits from AT&T and Google geometrically increase the linear footage of ROW impacted with construction by an order of magnitude, and geometrically increase the utility locating and inspection need as well.

Other than AT&T and Google each permit application takes between 1-4 person-hours to review, process, approve and return to the utility company. During 2014 the work generated by permit review and approval constituted the equivalent of 2 FTE.

As discussed in the previous section there is currently a deficit in the ability of the staff assigned to the utility permit, locating and inspections effort. This is evidenced by our inability to process permits and respond to utility locates in a timely manner, and provide enough inspections to provide adequate coverage for all of the utility crews working in the field.

Presently, we have a backlog 30-50 utility permits that have been received but not yet reviewed or approved. Utility locators are required by law to respond within three days of a locate request, and staff is frequently two weeks or more behind schedule with the recent increase in locate requests. This has been a source of complaints from utility companies. In order to adequately service the existing work load additional staff is required as shown in the table below along with the annual costs.

***Comparison to Other Cities – Raleigh and Charlotte***

Raleigh, NC – The City of Raleigh did not previously charge fees for the staff effort required to oversee the installation of private utilities in the public ROW. In 2014 they began to quantify and analyze the need and instituted a new fee structure in 2015. The fee structure is a $0.24 per linear foot with an $82 minimum.

Charlotte, NC – Charlotte does not charge a permit or inspection fees but does a full cost recovery by tracking staff time and issuing a bill to each utility on an annual basis.

Cary, NC – The Town of Cary does not have charge a permit fee; however they do charge a reinspection fee.

# APPENDIX: Utility Permit Fee Analysis Using Various Proposed Fee Schedules

| | | 2010 | 2011 | 2012 | 2013 | 2014 | Actual Jan-Apr 2015 | Forecast EOY 2015 | Forecast 2016 |
|---|---|---|---|---|---|---|---|---|---|
| **AT&T** | Number of Permits | 1 | | | 3 | 8 | 16 | 48 | 96 |
| | Linear Feet | 1,348 | | | 5,487 | 54,282 | 175,992 | 527,976 | 1,055,952 |
| | Average Linear Feet per permit | 1,348 | | | 1,829 | 6,785 | 11,000 | 11,000 | 11,000 |
| | Current Fee | $460.00 | | | $1,040.00 | $6,200.00 | $17,920.00 | $53,760.00 | $107,520.00 |
| | 50% Cost Revovery | $560.04 | | | $2,012.01 | $14,484.86 | $44,478.16 | $133,434.48 | $266,868.96 |
| | 75% Cost Recovery | $769.84 | | | $2,785.71 | $20,513.06 | $63,277.36 | $189,832.08 | $379,664.16 |
| | 100% Cost Recovery | $952.68 | | | $3,449.67 | $25,455.62 | $78,556.72 | $235,670.16 | $471,340.32 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Google** | Number of Permits | | | | | | | 184 | 182 |
| | Linear Feet | | | | | | | 1,728,031 | 1,709,249 |
| | Average Linear Feet per permit | | | | | | | 9,391 | 9,391 |
| | Current Fee | | | | | | | $253,920.00 | $251,160.00 |
| | 50% Cost Revovery | | | | | | | $443,447.13 | $438,627.27 |
| | 75% Cost Recovery | | | | | | | $630,050.23 | $623,202.17 |
| | 100% Cost Recovery | | | | | | | $782,092.71 | $773,592.09 |

| | | 2010 | 2011 | 2012 | 2013 | 2014 | Actual Jan-Apr 2015 | Forecast EOY 2015 | Forecast 2016 |
|---|---|---|---|---|---|---|---|---|---|
| **Frontier** | Number of Permits | 42 | 52 | 31 | 38 | 39 | 20 | 60 | 60 |
| | Linear Feet | 27,572 | 55,268 | 24,659 | 48,662 | 75,691 | 26,256 | 78,768 | 78,768 |
| | Average Linear Feet per permit | 656 | 1,063 | 795 | 1,281 | 1,941 | 1,313 | 1,313 | 1,313 |
| | Current Fee | $8,630.00 | $14,570.00 | $6,300.00 | $11,260.00 | $11,980.00 | $4,050.00 | $12,150.00 | $12,150.00 |
| | 50% Cost Revovery | $16,841.56 | $25,961.64 | $13,421.57 | $20,692.26 | $27,158.93 | $11,038.88 | $33,116.64 | $33,116.64 |
| | 75% Cost Recovery | $22,748.76 | $35,463.44 | $18,212.47 | $28,408.46 | $37,653.03 | $15,164.48 | $45,493.44 | $45,493.44 |
| | 100% Cost Recovery | $28,104.52 | $43,859.88 | $22,510.19 | $35,151.42 | $46,633.31 | $18,764.96 | $56,294.88 | $56,294.88 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PSNC** | Number of Permits | 171 | 170 | 187 | 291 | 553 | 238 | 714 | 922 |
| | Linear Feet | 35,263 | 33,018 | 46,194 | 91,262 | 77,592 | 48,703 | 146,109 | 188,647 |
| | Average Linear Feet per permit | 206 | 194 | 247 | 314 | 140 | 205 | 205 | 205 |
| | Current Fee | $13,890.00 | $15,000.00 | $14,800.00 | $24,970.00 | $35,570.00 | $17,790.00 | $53,370.00 | $68,908.10 |
| | 50% Cost Revovery | $50,860.49 | $50,344.14 | $57,374.62 | $93,740.26 | $156,096.16 | $70,701.69 | $212,105.07 | $273,857.18 |
| | 75% Cost Recovery | $67,211.79 | $66,470.94 | $76,019.02 | $124,691.46 | $205,330.36 | $93,421.99 | $280,265.97 | $361,862.39 |
| | 100% Cost Recovery | $82,857.83 | $81,937.38 | $93,739.54 | $153,817.42 | $253,012.72 | $115,168.23 | $345,504.69 | $446,094.66 |

| | | 2010 | 2011 | 2012 | 2013 | 2014 | Actual Jan-Apr 2015 | Forecast EOY 2015 | Forecast 2016 |
|---|---|---|---|---|---|---|---|---|---|
| **Duke Energy** | Number of Permits | 22 | 33 | 36 | 45 | 37 | 15 | 45 | 45 |
| | Linear Feet | 27,832 | 57,190 | 42,123 | 40,447 | 72,277 | 14,839 | 44,517 | 44,517 |
| | Average Linear Feet per permit | 1,265 | 1,733 | 1,170 | 899 | 1,953 | 989 | 989 | 989 |
| | Current Fee | $4,760.00 | $8,850.00 | $8,350.00 | $7,430.00 | $10,740.00 | $2,240.00 | $6,720.00 | $6,720.00 |
| | 50% Cost Revovery | $11,901.36 | $21,403.70 | $18,688.29 | $20,552.81 | $25,873.71 | $7,162.97 | $21,488.91 | $21,488.91 |
| | 75% Cost Recovery | $16,334.56 | $29,597.70 | $25,600.59 | $27,972.51 | $35,876.41 | $9,771.87 | $29,315.61 | $29,315.61 |
| | 100% Cost Recovery | $20,211.12 | $36,647.90 | $31,670.43 | $34,583.27 | $44,433.57 | $12,083.99 | $36,251.97 | $36,251.97 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Time Warner** | Number of Permits | 210 | 151 | 220 | 254 | 252 | 69 | 207 | 207 |
| | Linear Feet | 87,523 | 75,032 | 88,672 | 97,149 | 145,893 | 40,361 | 121,083 | 121,083 |
| | Average Linear Feet per permit | 417 | 497 | 403 | 382 | 579 | 585 | 585 | 585 |
| | Current Fee | $24,470.00 | $18,140.00 | $24,310.00 | $27,660.00 | $34,870.00 | $8,870.00 | $26,610.00 | $26,610.00 |
| | 50% Cost Revovery | $72,630.29 | $55,507.36 | $75,394.56 | $85,844.27 | $96,555.39 | $26,533.03 | $79,599.09 | $38,862.45 |
| | 75% Cost Recovery | $97,132.59 | $74,485.56 | $100,761.76 | $85,844.27 | $130,044.69 | $35,744.13 | $107,232.39 | $44,916.60 |
| | 100% Cost Recovery | $119,884.43 | $91,963.12 | $124,355.52 | $114,609.17 | $160,616.13 | $44,148.01 | $132,444.03 | $61,320.75 |

| | | 2010 | 2011 | 2012 | 2013 | 2014 | Actual Jan-Apr 2015 | Forecast EOY 2015 | Forecast 2016 |
|---|---|---|---|---|---|---|---|---|---|
| **All Others** | Number of Permits | 31 | 16 | 15 | 31 | 32 | 11 | 33 | 33 |
| | Linear Feet | 28,017 | 25,830 | 9,496 | 37,898 | 45,590 | 2,679 | 8,037 | 8,037 |
| | Average Linear Feet per permit | 904 | 1,614 | 633 | 1,223 | 1,425 | 244 | 244 | 244 |
| | Current Fee | $5,920.00 | $4,310.00 | $2,110.00 | $6,400.00 | $7,020.00 | $1,100.00 | $3,300.00 | $3,300.00 |
| | 50% Cost Revovery | $14,193.91 | $10,190.90 | $5,934.08 | $16,466.54 | $18,485.70 | $3,366.17 | $10,098.51 | $10,098.51 |
| | 75% Cost Recovery | $19,320.61 | $14,048.90 | $8,008.68 | $51,346.24 | $25,444.70 | $4,459.07 | $13,377.21 | $13,377.21 |
| | 100% Cost Recovery | $23,886.97 | $17,390.30 | $9,893.36 | $54,760.10 | $31,491.90 | $5,498.39 | $16,495.17 | $16,495.17 |